Climatological Data for July, 1910.

DISTRICT No. 11, CALIFORNIA.

Prof. ALEXANDER G. McADIE, District Editor.

GENERAL SUMMARY.

The most noticeable feature of the weather for the month of July was the prolonged dry period. While rainfall decreases during the summer months on the Pacific slope, and there is a well-marked rainless condition over most of California, ordinarily these months are marked by occasional showers, not in themselves heavy, but having a cumulative value sufficient for the agricultural needs of the section. The amounts may vary from an inch in the north coast counties of California to 3 or 4 inches in the coast section above the California line. It may be said that approximately from 3 to 5 per cent of the annual rainfall occurs during the month of July. While this is not a great quantity, the total absence of even this amount is noteworthy as indicating a seasonal condition out of the ordinary. And this condition apparently existed over a wide area, the departures from normal being frequently more marked elsewhere than in California.

The departures from the normal for the entire State of California, as given elsewhere, do not tell the whole story. Owing to afternoon thundershowers in the mountains and in the southern coast counties the section average is slightly above that of a normal month, while as a matter of fact it was an abnormal season; and the sections which usually report light showers, were dry; while the mountain sections which usually are dry, with afternoon thunderstorms without much rain, showed during the present month rainfall, which while light, was still sufficient to bring the amount above the normal.

The month was also noticeable because of its comparatively low temperature for midsummer. The first week was abnormally cold and afternoon temperatures in the Great Valley did not exceed 90°. The last week of the month was also cold, although in the interior, afternoon temperatures were normal. Warm weather prevailed from about the 6th to the 15th, afternoon temperatures in the Great Valley running well up to 100° and higher, and again from the 18th to the 25th. In the coast sections temperatures continued low throughout the month.

The feature of most interest from an engineering point of view is the absence of sufficient water power. As far back as April the reports of this section foreshadowed a scarcity of water by the end of July, unless unlooked for precipitation occurred. The snow cover in the mountains at the beginning of summer was neither deep nor extensive. By the 1st of July snow was to be found only on the high peaks. It is probably fair to say that at the close of July there was less snow in sight than during any previous year at the same time since the country has been settled. This condition is reflected in the stages of the rivers. Apparently the run-off is less than during any July of which there is a record. Travel through the mountains opened early and mountain people report passes free from snow and water courses with little water in them, conditions previously unknown. Aside from the economic aspect, the absence of the usual floods from the melting of the snow and the marked deficiency in run-off this summer are interesting because they furnish a clear illustration of marked variation in water supply *not* caused by any artificial condition, such as deforestation or settlement of areas, but simply due to natural causes. Press reports confirm the river reports, showing an unusual condition of the navigable waters of the State. Sand bars have been formed in the Sacramento River, interfering with navigation. At Sacramento the river was lower than ever before reported during the month of July. In the San Joaquin watershed at some of the river gaging stations the water is but a few inches in depth.

TEMPERATURE.

The mean temperature for the State was 75.5°, or slightly below normal. As previously stated, this mean value gives no indication of the unusually cool condition prevailing in the coast counties during nearly the entire month. On the other hand, afternoon temperatures in the interior, while not higher than in previous Julys, continued at a high point for a longer period. The mean values for California in recent years are as follows: 1897, 74.5°; 1898, 81.4°; 1899, 77.9°; 1900, 75.9°; 1901, 76.0°; 1902, 72.8°; 1903, 71.2°; 1904, 72.2°; 1905, 74.8°; 1906, 76.8°; 1907, 73.1°; 1908, 76.4°; 1909. 71.2°; 1910, 75.5°.

The highest temperature recorded was 119° at Mammoth Tank on the 20th. Other high temperatures were: 118° at Heber on the 7th and at Needles on the 9th; 117° at Indio on the 7th; and 116° at Blythe, Calexico and Wasco, and 115° at Bagdad, Brawley, Orleans, and Shasta. It will be noticed that with the exception of Shasta the high temperatures are reported from stations in the southeastern counties. The temperatures reported were not as high as those occurring on May 30, this year, when at Blythe, Heber, and Indio 121° was reported.

The lowest temperature was 22° at Macdoel on the 3d. The highest monthly mean was 96.8° at Bagdad and the lowest 52° at Point Reyes Light.

From an agricultural standpoint temperatures during July were favorable, hastening the ripening of fruit.

PRECIPITATION.

The section average was 0.10 of an inch, or .02 of an inch above the normal. The amounts for previous years are as follows: 1897, .01 of an inch; 1898, trace; 1899, trace; 1900, 0.03; 1901, 0.01; 1902, 0.70; 1903, 0.03; 1904, 0.09; 1905, 0.01; 1906, 0.04; 1907, 0.03; 1908, 0.04; 1909, 0.05; 1910, 0.10. The greatest monthly amount was at Campo, 3.44 inches. More than half the stations in the State reported no rainfall. In the northern coast counties the absence of rain was noticeable. For example, normal rainfall at Eureka for the month of July is 0.09 of an inch. There was light rain during the first week of July, but none during the succeeding weeks, and the seasonal from March 1 to July 31 shows a deficiency of nearly 75 per cent.

The precipitation was chiefly in the mountain sections and in the form of afternoon thunderstorms. The cooperative observer at Campo calls attention to the fact that the first Sonora clouds were about two weeks later than usual in appearing. He also states that it was the wettest month for several years in that section. There was a period of unsettled weather from the 17th to the 20th. Mountain rains were reported in the Sierra Madre, and on the 18th there were thundershowers along the southern coast. At Santa Ana, the home of the Rev. Alfred Quitu, in the Catholic French Colony at San Juan Capistrano, was struck by lightning and burned to the ground. The occupants, 3 in number, escaped uninjured. At Redlands there was a shower lasting 20 minutes with 0.38 inch rainfall. Some minor washouts occurred on the Salt Lake Railroad near Otis.

In the northern counties afternoon thunderstorms did some damage to stock near Sierraville on the 19th.

SNOWFALL.

Not since the country was first settled has there been so little snow in the mountains as now. The whole season has been one of deficient snowfall. For travel in the mountains, conditions have been excellent and pack trains have experienced no difficulty on account of snow. As anticipated, early in the season, it is a bad year for water. Unless the storms are unus-

usually early in the fall the water supply will be deficient to a marked degree.

EARTHQUAKES.

Alameda, July 27, two shocks, 11:30 and 11:35 a. m. At Berkley, light shocks occurred on the 20th and 26th. At Tamarack a light shock occurred at 8:45 p. m., 13th

The Wiechert seismograph at Santa Clara College recorded an earthquake on July 2, from 5:15:54 p. m. to 5:18:24 p. m., with a maximum double amplitude of 2.5 mm. north and south; 2.6 mm. east and west, and 1 mm. vertical. On July 25 a disturbance was recorded at 9:41:20 a. m., ending 9:44:54, with amplitude 12.5 mm., north and south, 13 mm., east and west, and 2.5 mm. vertical. A faint shock was felt, the first movement from the west. It is worth noting that on July 26, in Japan, time not known, there was a great earthquake felt on the Island of Yezo (Hokkaido), the most northern island of the Japanese Empire.

MISCELLANEOUS NOTES.

Alturas.—The thunderstorm on the 14th gave 0.38 of an inch of rain in 10 minutes, and the one on the 19th gave 1.38 inch in an hour. Both local.—*C. B. Towle.*

Campo.—The first Sonora clouds were about two weeks behind time this year, appearing on the 13th and continued all through the month. Over 2 inches of rain fell in Laguna Valley, 6 or 12 miles east. Heavy rain fell on the 27th, some creeks running 10 feet of water. At San Felipe, to the north of this place, 2 inches fell in 20 minutes. It is the wettest month generally all over the mountain belt for many years.—*Archibald Campbell.*

Downieville.—Unusually hot weather for this altitude. Rivers lower than ever before known at this date.

La Porte.—The springs around here and the water in the water courses are lower this year than in many years past at this date.—*Charles W. Hendel.*

Sierra Madre.—On the 21st, when the thermometer was 104°, a sandstorm drifted up the valley and the temperature dropped 20° in about half an hour.—*Miss A. E. Carter.*

Sierraville.—A severe thunderstorm on the 19th; 150 head of sheep were killed by lightning near Gold Lake.

Tamarack.—A cloudburst occurred on the 19th, when 1.50 inch of rain and hail fell in 15 minutes at this station. Some cattle and sheep were lost and much damage done to the roads.—*William Bennett.*

Willows.—A beautiful display of ascending air currents through the far clouds at noon on the 28th, cirrus and cirrocumulus sheets of perpendicular lines extended below each cloud, and those of the center were of corkscrew shape. The air seemed full of bars where the clouds had disappeared.—*M. T. Harrington, jr.*

NOTES ON RIVER CONDITIONS IN THE SACRAMENTO AND SAN JOAQUIN VALLEYS DURING JULY, 1910.

Sacramento watershed.—All of the large streams in the Sacramento drainage basin fell slowly during July and carried less water than for any corresponding month of which there is an authentic record.

There has been a marked diminution in the run-off in the feeders of the main water courses throughout the Sacramento Valley, and some of the smaller mountain streams that heretofore flowed until well into the month of August, have become practically dry.

While the Sacramento, between Red Bluff and Redding is lower than for the past 5 years, the river between these points has fallen very slowly, there having been a range at Red Bluff of only 1 foot between the stage on June 1 and that of July 31, and only 0.4 foot between the first and last days of July. From Redding northward to the mouth of the Pitt River, the Sacramento is markedly below the July normal.

At Colusa the river was 1.5 foot lower than the low water of July, 1908, and 2.3 feet below the normal for the month, and at Knights Landing it was 1.2 foot below the low water of July, 1908, and over 2 feet below the normal for the month.

At Sacramento City the river was the lowest that has ever been recorded during the month in question, with an average stage of 1.3 foot below the previous lowest water during the month, and nearly 6 feet below the normal stage that has been maintained at this point in July during the past 10 years.

In the lower reaches of the Sacramento River, especially between Courtland and Collinsville, practically normal stages, with the usual fluctuations, due to tide action, have obtained.

In the Feather-Yuba territory the run-off of all streams diminished gradually during the month, and reports indicate that some of the smaller tributaries of the Yuba have practically ceased discharging. The average stage of the Yuba, at Marysville, was 6.5 feet, which is over 4 feet below the usual avearge for July and 1.4 foot below the previous lowest average for the month. The Feather, at Oroville, averaged 2 feet below the normal and nearly 1 foot lower than any stage previously recorded in July.

The American River, and all streams throughout its drainage basin, fell slowly but steadily. At Folsom it averaged 1.5 foot below the normal July stage, and 0.7 foot lower than the lowest ever previously recorded during the month.

Sand bars in the Sacramento River, near Sacramento City, have impeded navigation during the entire month, and the problem of removing these obstructions has been studied by some of the United States Engineer officials, who have visited this section for the purpose of observing the situation.

San Joaquin watershed.—All streams in this watershed continued to subside during the month, and in some cases the extreme summer low water stage has already been reached.

At Merced Falls the Merced River reached the zero mark on the gage on the 31st, and at Jacksonville, on the Tuolumne, the river was within 0.6 foot of the lowest stage ever before recorded. At Melones the Stanislaus was below the limits of the river gage and falling slowly. At Electra the Mokelumne reached the zero of the gage on the 28th, with indications that it will fall to a lower stage before the beginning of the rainy season.

There is still some water in the Calaveras River, but there is practically no discharge from this stream beyond the mouth of Mormon Slough, which is now dry between Bellota and the city of Stockton.

The San Joaquin itself has held up reasonably well below the mouth of the Calaveras. In the upper reaches of this stream, however, and especially above the mouth of the Merced River, it has been abnormally low, and during the month carried less water than for any July of which there is a record.—*N. R. Taylor, Local Forecaster.*

EVAPORATION AT LAKE ELEANOR.

Mr. Todd, of the Engineer Corps of the city of San Francisco, reports that during the month of July, 1910, the total evaporation at Lake Eleanor was 5.84 inches, divided very nearly into two-thirds and one-third, as the day and the night evaporation. The amounts were respectively, 3.89 and 1.95, with the night of June 30–July 1 omitted. If an average value be taken for the missing night, it would bring the monthly night evaporation up to 2.01 inches, and the total for the month 5.90 inches.

FROST FIGHTING.

Abstract of a paper by A. G. McAdie read at a meeting of orange and lemon growers at Pomona, Cal., June 28, 1910, by by A. B. Wollaber, Local Forecaster:

For 14 years a progressive campaign has been waged by fruit growers and Weather Bureau officials in California for the purpose of protecting citrus fruits from frost. Much satisfactory

work has been accomplished and the whole problem of protection so developed that the question has ceased to be one of local interest, and has spread to other States, becoming one of national importance. If the general principles laid down are correct, they can be applied successfully in the case of crops other than citrus ones, due allowance being made for new and changed conditions. So far as known, all of the present methods of protecting crops had their origin in California.

Before considering the physical processes involved in the formation of frost, it may be well to recall the conditions last winter in the San Gabriel Valley and other sections of California south of the Tehachapi. At the close of December, 1909, there was a prospective yield of 36,000 car loads of citrus fruit, one-fifth of the crop being lemons. The low temperature of the first week in January, 1910, caused a loss of perhaps 25 per cent During the entire winter there was no failure on the part of Weather Bureau officials to give ample and urgent warnings of the impending frosts. This is mentioned because it is considered equivalent to half the battle won and shows what can be done in that direction.

* * * * * * *

It would probably repay the citrus fruit growers to purchase and install from 20 to 40 thermographs and hygrographs in the San Gabriel Valley alone. An instrument has been designed in the San Francisco weather office especially for the use of growers. It is the nature of a combined thermograph and hygrograph; but so arranged that the record ordinarily given as a relative humidity is given in terms of the weight of the water vapor present. Relative humidity is at best only a ratio and means various things for various temperatures. It is, therefore, an unreliable index and may prove misleading in determining the minimum temperature. The new instrument, by indicating the actual weight of water vapor present, probably affords a more reliable index of the actual conditions. Any variation in the weight of the water vapor can be read from the record, and thus the grower can with more certainty determine the need of protection and the amount of heat required to offset the probable fall in temperature. Experience has shown that single observations of the dew-point shortly before sunset can not be relied upon to furnish a true value of the minimum temperature likely to occur. A continuous record of the amount of water vapor present, or rather its complement, the deficiency from saturation, shows the grower to what extent he may depend upon the water vapor as a protective agency.

* * * * * * *

The frosts which did the damage last winter were those of December 19, 1909, and January 3, 4, 5, 6, 7 and 8, 1910. Studies of the conditions have been made and it appears that the air temperature at a point 6 feet above the ground averaged 24° F. (4° C.). The rate of fall after sunset, the time of minimum and the number of hours the temperature was below 32° cannot be given with precision.

Of course the condition of the tree plays a very important part. Every grower knows that a tree that is backward or not in a tender condition will show less injury than it would otherwise. And furthermore, the exposure of the chilled fruit to the sun's rays in the morning plays a most important part. It is as necessary to study the rise in temperature immediately following the frost as it is to study the fall.

In general, the typically dangerous temperature curve is one showing a nearly uniform rate of fall from early afternoon to midnight, a slight check about midnight and nearly constant temperature until 4 a. m. Then and until sunrise or a little after a drop of 2°, 3°, or 4°. Then a rise at the rate of 3° or more per hour.

The general campaign of frost fighting, as developed in California and now followed elsewhere, consists of—

1. Accurate advance information of the likelihood of frost.
2. Application of preventive means during critical hours.
3. Guarding the fruit from a too rapid warming.

Under the first head the fruit grower has now little more to do than to keep in touch by telephone with the nearest forecasting center. Frost is primarily a matter of *air drainage*. As a result of certain movements of low and high pressure areas and the displacement of the lower air, comparatively still, dust free conditions ensue. There is very little water vapor present and radiation from soil and plant is marked. The air circulation near the ground becomes stagnant. Air is a poor conductor of heat, and there is but little warming of the soil by direct conduction from below. In other words, the loss of heat is a maximum and the supply a minimum.

* * * * * * *

Under the second, large fires are not as effective as numerous small fires or heaters. Many of the latter, known as orchard heaters, now on the market, have proven their worth; but the ideal heater, it seems to us, is still to be devised. One is needed that will give heat in sufficient quantity and with a fan or blower, thoroughly to mix the lower air.

In all the devices now on the market attention has been given simply to the heating. Fuel of different kinds is used and for various crops there will be a difference in efficiency, depending upon the fuel used, cost of labor, etc.

It seems to the writer that all protective devices are based upon the three following principles: (1) heating, (2) covering, (3) ventilating.

Under the first, come all forms of fire baskets, oil pots, and orchard heaters. Under the second, cloth covers, lattice work, artificial cloud builders, smudge makers, and the new antifrost cover. Under the third head there should be devised suitable forms of blowers and air mixers.

THE DISPOSITION OF SMOKE.

By ALEXANDER G. McADIE.

At a meeting of the American Chemical Society held in San Francisco during the second week in July, 1910, Dr. E. G. Cottrell, of the University of California, described in an illustrated lecture the work done by himself and others at the Selby Smelter, on San Francisco Bay, in precipitating smoke particles by the use of a high voltage direct electric current.

The air of cities where manufacturing plants of any size are established is, as is well known, vitiated by the outpouring smoke and products of imperfect combustion; from chimney stacks, which in many cases are not high enough to permit proper carrying away of the smoke. In some cities the nuisance has become so great and injury to health and porperty so apparent that antismoke ordinances have been enacted and are enforced.

Of late years, in connection with large smelters, much damage has been done to crops and animal life in the neighborhood, since in the treatment of sulphide ores, large volumes of sulphur dioxide fumes are set free.

In some of the older forms of smoke protectors, woolen bags were used; but these, as Doctor Cottrell shows, while effective in the case of blast furnace gases containing a small quantity of the sulphur compounds, are not altogether satisfactory where "the roaster and refinery fumes are so strong as to soon destroy the woolen bags." Also, the cost of the reinforced concrete bag house is high and the electric power consumption for the blower is as great as that required by the electrostatic method.

In the new process the charged gas particles are forced to a lead plate, precipitated and recovered as dilute sulphuric acid. The electrification of the gas is accomplished by means of an alternating current stepped up through a transformer to 40,000 volts and rectified by means of a synchronous motor, so adjusted that only the peak of the wave is utilized. The discontinuous direct current thus produced is discharged from an asbestos electrode suspended in the midst of the smoke, thereby removing the obnoxious gases.

TABLE 1.—*Climatological data for July, 1910. District No. 11, California.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
Oregon.																			
Klamath Agency	Klamath	4,169	2	59.8	.....	90	12†	24	4	58	0.01	.....	0.01	0.0	1	21	3	7	s.	Edson C. Watson.
Klamath Falls	....do	4,250	15	68.6	+ 0.9	94	13	37	4	37	0.26	+ 0.14	0.26	0.0	1	24	3	4	nw.	W. H. Hellman.
Lakeview	Lake	4,800	7	63.2	− 3.3	101	30	20	4	70	0.00	− 0.28	0.00	0.0	0	27	2	2	s.	Geo. L. Wharton, jr.
Merrill	Klamath	4,070	4	67.4	.....	95	13	37	5	45	0.81	.....	0.00	0.0	2	25	6	0	.....	Mrs. Agnes Ritchson.
Yonna	....do	.....	3	65.5	.....	95	10†	32	4†	54	0.30	.....	0.22	0.0	3	24	7	0	s.	Jacob Rueck.
California.																				
Alameda	Alameda	.....	1	67.2	.....	84	19	57	3	...	T.	.....	T.	0.0	0	31	0	0	w.	Chas. E. Sears.
Alturas	Modoc	4,460	6	69.2	.....	100	13	33	5	56	2.29	.....	1.88	0.0	4	24	7	0	sw.	Prof. C. B. Towle.
Anderson (near)	Shasta	550	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. S. Richardson.
Angiola	Tulare	208	10	79.5	+ 1.6	112	18	40	2†	69	0.00	0.00	0.00	0.0	.....	.....	.....	.....	.....	Santa Fe Co.
Antioch	Contra Costa	46	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Aptos	Santa Cruz	102	25	62.4	+ 0.1	75	5	54	30†	...	0.00	− 0.01	0.00	0.0	0	23	5	3	nw.	Do.
Arrowhead Springs	San Bernardino	2,000	1	78.3	.....	106	20	47	3	38	0.00	.....	0.00	0.0	0	.....	.....	.....	.....	G. I. Royce.
Auburn	Placer	1,360	9	75.3	− 1.5	105	20	42	4	46	0.00	− 0.02	0.00	0.0	0	30	1	0	.....	Southern Pacific Co.
Avalon	Los Angeles	.....	.....	65.7	.....	79	21	53	4	18	T.	.....	T.	0.0	0	26	5	0	w.	W. N. Vilas.
Azusa	....do	540	8	76.9	.....	112	21	46	5	58	0.00	0.00	0.00	0.0	0	31	0	0	sw.	A. P. Griffith.
Bagdad	San Bernardino	784	7	96.8	.....	115	20†	78	5†	27	.T	.....	T.	0.0	0	.....	.....	.....	.....	Santa Fe Co.
Bakersfield	Kern	404	21	86.6	− 2.0	110	21†	58	4	40	0.00	− 0.02	0.00	0.0	0	31	0	0	.....	Do.
Barstow	San Bernardino	2,105	7	86.0	.....	112	13	55	5	47	0.22	+ 0.19	0.21	0.0	4	30	1	0	w.	E. L. White.
Berkeley	Alameda	317	23	60.6	− 0.4	79	5	50	5	29	0.00	− 0.04	0.00	0.0	9	8	14	0	c.	State University
Biggs	Butte	98	11	79.5	+ 0.8	106	8	62	3†	...	0.00	0.00	0.00	0.0	0	31	0	0	s.	Southern Pacific Co.
Bishop	Inyo	4,450	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. A. Chalfant.
Blocksburg	Humboldt	1,700	4	69.7	.....	104	9	39	1	45	T.	.....	T.	0.0	0	27	3	1	nw.	Victor Hope.
Blue Canon	Placer	4,695	11	66.4	+ 0.4	90	10	32	6	45	0.00	0.00	0.00	0.0	0	28	0	3	.....	Southern Pacific Co.
Blythe	Riverside	.....	1	89.2	.....	116	20	57	1	49	0.63	.....	0.38	0.0	4	18	8	5	sw.	H. V. Blenkiron.
Branscomb	Mendocino	2,000	10	68.4	.....	100	8	42	17	47	0.00	− 0.13	0.00	0.0	0	30	1	0	n.	A. J. Haun.
Brawley	Imperial	−105	1	91.8	.....	115	20	62	1	42	0.00	.....	0.00	0.0	0	.....	.....	.....	.....	U. S. Weather Bureau.
Brush Creek	Butte	2,140	6	73.2	.....	106	8†	40	2†	56	0.00	.....	0.00	0.0	0	.....	.....	.....	.....	Cal. Gas & Electric Co.
Calexico	Imperial	0	5	90.3	.....	116	7†	71	3	38	0.08	.....	0.08	0.0	1	19	9	3	se.	J. E. Peck.
Caliente	Kern	1,290	34	92.0	+ 7.2	106	21†	72	3	..	0.00	0.00	0.00	0.0	0	31	0	0	.....	Southern Pacific Co.
Calistoga	Napa	363	38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Campbell	Santa Clara	217	13	63.4	− 1.5	89	9	40	1†	44	T.	0.00	T.	0.0	0	24	1	6	nw.	F. M. Righter.
Camptonville (near)	Yuba	3,500	3	79.4	.....	111	9	42	4	48	0.00	.....	0.00	0.0	0	27	4	0	.....	S. B. Johnson.
Cedarville	Modoc	4,675	16	73.8	+ 4.6	99	13†	45	5	43	0.03	− 0.27	0.03	0.0	1	30	1	0	sw.	T. H. Johnstone.
Chico	Butte	189	40	80.2	− 3.7	110	8	48	4	48	0.00	− 0.04	0.00	0.0	0	31	0	0	s.	Butte Co. R. R.
China Flat	Humboldt	600	1	77.4	.....	113	9	47	5	54	0.00	.....	0.00	0.0	0	28	3	0	nw.	O. I. Westerburg.
Chino	San Bernardino	714	18	79.9	+ 2.8	103	18	61	31	...	0.00	− 0.04	0.00	0.0	0	22	6	3	w.	Southern Pacific Co.
Cisco	Placer	5,939	39	81.7	+18.5	95	17	58	2	...	0.00	− 0.03	0.00	0.0	0	31	0	0	.....	Do.
Claremont	Los Angeles	1,200	18	76.6	+ 5.0	110	20†	49	2†	46	0.00	− 0.02	0.00	0.0	0	22	9	0	w.	F. P. Brackett.
Cloverdale	Sonoma	340	8	72.0	.....	108	8	43	26	57	0.00	.....	0.00	0.0	0	30	1	0	n.	Lloyd Browne.
Colfax	Placer	2,421	39	74.3	− 1.0	99	10	44	3†	37	0.00	− 0.03	0.00	0.0	0	29	0	2	s.	Southern Pacific Co.
Colusa	Colusa	60	7.	80.4	.....	105	8†	48	4	28	0.00	0.00	0.00	0.0	0	.....	.....	.....	.....	W. K. De Jarnatt.
Corning	Tehama	277	24	86.7	+ 3.3	110	8†	60	3	...	0.00	0.00	0.00	0.0	0	29	2	0	s.	Southern Pacific Co.
Cuyamaca	San Diego	4,677	11	73.1	+ 8.1	96	21	53	1	31	1.50	+ 1.13	0.74	0.0	5	10	17	4	e.	L. L. Macquarie.
Daunt	Tulare	4,000	3	72.6	.....	98	20†	38	3	44	0.26	.....	0.15	0.0	2	25	4	2	.....	D. L. Wishon.
Davisville	Yolo	51	38	73.6	− 4.3	108	8†	43	4	54	0.00	− 0.02	0.00	0.0	6	29	2	0	sw.	S. H. Beckett.
Deer Creek	Nevada	3,700	3	66.3	.....	93	9	33	4	42	0.00	.....	0.00	0.0	0	25	6	0	w.	Cal. Gas & Electric Co.
Delta	Shasta	1,138	25	67.7	−11.2	107	9	37	1	64	0.00	− 0.13	0.00	0.0	0	31	0	0	n.	Southern Pacific Co.
Denair	Stanislaus	126	10	76.8	+ 0.7	108	19	46	4	54	0.00	0.00	0.00	0.0	0	31	0	0	.....	Santa Fe Co.
Dobbins	Yuba	1,650	6	79.0	.....	104	8†	50	4	38	T.	.....	T.	0.0	0	30	1	0	s.	Cal. Gas & Electric Co.
Dudleys	Mariposa	3,000	1	67.9	.....	96	16	31	4	50	0.17	.....	0.09	0.0	2	24	5	2	n.	W. H. Dudley.
Dunnigan	Yolo	65	33	87.9	+ 6.1	108	8	68	31	...	0.00	0.00	0.00	0.0	0	31	0	0	n.	Southern Pacific Co.
Dunsmuir	Siskiyou	2,285	21	73.7	+ 4.2	104	9	50	16	...	0.00	− 0.26	0.00	0.0	0	29	0	2	n.	Do.
Durham	Butte	160	15	78.2	− 1.2	109	9	47	3	49	0.00	− 0.05	0.00	0.0	0	28	3	0	s.	R. W. Durham
El Cajon	San Diego	482	11	73.4	+ 2.1	101	6†	47	1	47	0.34	+ 0.24	0.33	0.0	2	29	2	0	sw.	H. H. Kessler.
Electra	Amador	725	6	82.7	.....	112	20	50	4	48	0.00	.....	0.00	0.0	0	30	1	0	.....	Cal. Gas & Electric Co.
Elsinore	Riverside	1,234	15	78.2	− 0.2	111	21	45	4	56	0.09	+ 0.07	0.09	0.0	1	27	4	0	w.	W. H. Bohannon.
Emigrant Gap	Placer	5,230	36	76.8	+ 9.3	90	28	59	2	22	0.00	− 0.03	0.00	0.0	0	28	0	3	.....	Southern Pacific Co.
Escondido	San Diego	657	16	74.0	+ 1.5	103	7	46	4†	48	0.25	+ 0.25	0.14	0.0	2	10	21	0	w.	A. R. Moon.
Eureka	Humboldt	64	24	54.7	− 0.6	63	19	47	18	13	0.00	− 0.09	0.00	0.0	0	4	13	14	nw.	U. S. Weather Bureau.
Farmington	San Joaquin	111	31	80.4	+ 2.2	106	20	56	3	...	0.00	0.00	0.00	0.0	31	0	0	0	nw.	Southern Pacific Co.
Folsom	Sacramento	252	38	78.8	− 3.1	110	18†	47	4	47	0.00	− 0.01	0.00	0.0	0	28	1	2	s.	F. O. Hutton.
Fordyce Dam	Nevada	6,500	15	61.6	.....	85	8†	32	4	34	0.14	− 0.06	0.08	0.0	2	24	7	0	sw.	E. E. Roening.
Fouts Springs	Colusa	1,650	6	70.9	.....	102	9†	40	3	49	T.	.....	T.	0.0	0	31	0	0	.....	H. S. Green.
Fresno	Fresno	293	23	83.2	+ 1.2	110	21	51	4	42	T.	0.00	T.	0.0	0	26	5	0	w.	U. S. Weather Bureau.
Fruto	Glenn	624	21	83.3	+ 0.8	111	9	58	3	...	0.00	0.00	0.00	0.0	0	31	0	0	s.	Southern Pacific Co.
Galt	Sacramento	49	32	72.3	− 6.7	101	18	53	28	...	0.00	0.00	0.00	0.0	0	29	1	1	w.	Do.
Georgetown	El Dorado	2,650	37	78.6	− 0.2	101	9	42	4	37	0.00	− 0.06	0.00	0.0	0	31	0	0	sw.	H. D. Jerrett.
Gilroy	Santa Clara	193	36	70.2	+ 1.4	105	18	55	2†	...	0.00	0.00	0.00	0.0	0	31	0	0	se.	Southern Pacific Co.
Gold Run	Placer	3,222	11	77.2	+ 2.2	98	9†	46	4	30	0.00	0.00	0.00	0.0	0	27	2	2	.....	Do.
Gonzales	Monterey	127	11	59.1	− 0.8	85	5†	45	11	...	0.00	0.00	0.00	0.0	0	29	1	1	n.	Do.
Grass Valley	Nevada	2,690	38	75.0	.....	99	9	41	4	34	0.00	− 0.04	0.00	0.0	0	30	1	0	sw.	F. R. Hull.
Greenville	Plumas	3,600	16	66.8	+ 1.4	100	8†	33	4	60	0.35	+ 0.15	0.35	0.0	1	27	4	0	sw.	C. H. Higbie.
Groveland	Tuolumne	2,828	1	74.8	.....	98	20†	37	4	42	0.12	.....	0.12	0.0	1	23	8	0	.....	H. S. Richardson.
Guinda	Yolo	350	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Hanford	Kings	249	10	89.4	+ 1.9	108	10	80	4	44	0.00	0.00	0.00	0.0	0	29	1	1	.....	Santa Fe Co.
Healdsburg	Sonoma	110	17	68.1	+ 1.3	100	6†	42	21†	52	0.00	− 0.07	0.00	0.0	0	.....	.....	.....	.....	John Favour.
Hearst	Mendocino	1,800	.....	72.8	.....	104	7	48	1†	52	0.01	.....	0.01	0.0	1	29	2	0	w.	H. D. Ellmaker.
Heber	Imperial	−20	4	92.7	.....	118	7†	60	2	50	T.	.....	T.	0.0	0	26	3	2	sc.	E. T. Chumard.
Hollister	San Benito	284	36	64.0	− 3.2	94	20	42	2	45	0.06	+ 0.05	0.06	0.0	1	29	2	0	w.	J. N. Thompson.
Hornbrook	Siskiyou	2,154	22	58.6	−16.7	98	11†	40	13	...	0.00	− 0.25	0.00	0.0	0	31	0	0	w.	Southern Pacific Co.
Hot Springs	Tulare	3,300	3	76.2	.....	99	22	43	4	36	0.01	.....	0.01	0.0	1	30	0	1	.....	U. S. Forest Service.
Hullville (near)	Lake	2,250	3	72.2	.....	102	9	46	3	43	0.05	.....	0.05	0.0	1	18	13	0	sw.	John Duggan.
Idyllwild	Riverside	5,250	9	72.4	.....	98	21	44	1	46	0.55	.....	0.31	0.0	4	20	8	3	sw.	Earl Powers.
Independence	Inyo	3,907	14	77.9	− 0.6	102	9	48	4	41	0.27	+ 0.16	0.18	0.0	2	21	8	2	.....	U. S. Weather Bureau.
Indio	Riverside	−20	32	93.4	− 1.1	117	7†	65	9	38	T.	0.00	T.	0.0	0	33	8	0	nw.	F. N. Johnson.
Inskip	Butte	4,975	3	70.3	.....	94	9	40	1	30	0.00	.....	0.00	0.0	0	24	7	0	.....	Cal. Gas & Electric Co.
Ione	Amador	287	32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Iowa Hill	Placer	2,825	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. F. Macy.
Jamestown	Tuolumne	1,471	7	77.6	.....	105	19	45	2†	41	0.65	.....	0.05	0.0	1	29	2	0	.....	Sierra Ry. of California.
King City	Monterey	333	23	68.2	+ 1.2	102	6	40	5	57	0.00	0.00	0.00	0.0	0	31	0	0	n.	Southern Pacific Co.
La Porte	Plumas	5,000	16	64.9	+ 2.4	92	9	33	4†	45	T.	− 0.25	T.	0.0	0	30	1	0	w.	C. W. Hendel.
Le Grand	Merced	255	10	81.1	+ 2.7	111	21	46	4	44	0.20	+ 0.20	0.20	0.0	1	31	0	0	.....	Santa Fe Co.
Lemon Cove	Tulare	600	15	84.1	+ 0.8	112	20†	48	4	47	T.	− 0.01	T.	0.0	0	26	2	3	sw.	G. W. Sandidge.
Lick Observatory	Santa Clara	4,209	21	70.5	+ 1.1	88	18	39	3†	23	0.04	+ 0.04	0.03	0.0	2	23	8	0	nw.	The Director.
Livermore	Alameda	485	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. G. Still.
Lodi	San Joaquin	45	28	73.4	− 0.3	104	20	45	2	42	0.00	0.00	0.00	0.0	0	30	1	0	w.	Ezra Fiske.

TABLE 1.—*Climatological data for July, 1910. District No. 11*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
California—Cont'd.																				
Lone Pine	Inyo	2,728	5	76.0	.....	101	9†	40	3	55	0.18	.....	0.18	0.0	1	15	14	2	s.	G. F. Marsh.
Long Valley	Lassen	4,400	1	74.9[k]	.....	100	10	43	5	46	T.	.....	T.	0.0	0	20	6	5	sw.	A. G. Evans.
Los Angeles	Los Angeles	293	33	70.2	+ 2.8	93	6	54	14	30	0.04	+ 0.02	0.04	0.0	1	19	11	1	sw.	U. S. Weather Bureau.
Los Banos	Merced	121	23	77.8	— 3.7	104	18	60	2†	...	0.00	— 0.01	0.00	0.0	0	27	0	4	w.	Southern Pacific Co.
Los Gatos	Santa Clara	600	23	67.8	+ 0.1	96	19	44	1†	45	T.	0.00	T.	0.0	0	27	3	1	n.	F. H. McCullagh.
Lytle Creek	San Bernardino	2,900	1	73.4	.....	103	20	40	3	45	0.00	.....	0.00	0.0	0					W. E. Anderson.
Macdoel	Siskiyou	4,258	3	64.0	.....	95	13	22	3	51	0.67	.....	0.57	0.0	2	24	5	2	nw.	B. V. L. Co.
Madeline	Lassen	5,270	1	65.4	.....	92	7†	37	1	52	1.63	.....	0.63	0.0	5	22	6	3	w.	J. H. Williams.
Magalia	Butte	2,321	6	74.2	.....	105	9	39	2	48	0.00	.....	0.00	0.0	0	29	2	0	se.	Butte County R. R. Co.
Mammoth Tank	Imperial	257	32	91.6	— 6.9	119	20	67	14	41	0.76	+ 0.70	0.76	0.0	1	17	11	3	w.	Southern Pacific Co.
Marysville	Yuba	67	39	77.4	— 2.6	105	20	52	31	44	0.00	0.00	0.00	0.0	0	31	0	0	s.	Do.
Mecca	Riverside	−185	4	91.6	.....	114	20	65	2	41	0.00	.....	0.00	0.0	0	23	6	2	se.	A. Lunsted.
Menlo Park	San Mateo	64	32	67.5	— 0.2	88	5†	50	2†	...	0.00	— 0.01	0.00	0.0	0	31	0	0	nw.	Southern Pacific Co.
Merced	Merced	173	36	77.4	— 4.3	104	21	54	4	33	0.00	— 0.01	0.00	0.0	0	31	0	0	nw.	Santa Fe Co.
Mill Creek (1)	Amador	.....	3	71.4	.....	94	14†	42	11	40	0.00	.....	0.00	0.0	0	29	1	1	n.	Cal. Gas ● Electric Co.
Milton (near)	Calaveras	660	19	78.1	— 0.5	107	18†	49	4	42	T.	0.00	T.	0.0	0	28	3	0	nw.	J. H. Southwick.
Modesto	Stanislaus	90	38	84.5	+ 3.0	107	18	61	1	...	T.	— 0.01	T.	0.0	0	30	0	1	.....	Southern Pacific Co.
Mojave	Kern	2,751	33	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Mokelumne Hill	Calaveras	1,550	17	77.2	+ 1.4	101	18	35	3	43	T.	0.00	0.00	0.0	0	29	2	0	.....	C. E. Prindle.
Mono Ranch	Ventura	3,210	4	74.5	.....	96	20	41	4	45	T.	.....	T.	0.0	0	25	5	1	w.	H. Lathrop.
Montague	Siskiyou	2,450	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. H. Chambers.
Monterey	Monterey	15	45	63.6	+ 2.6	76	17†	56	2†	...	0.00	0.00	0.00	0.0	0	31	0	0	nw.	Southern Pacific Co.
Monterio	Kern	4,500	11	79.6	+ 3.4	104	20	58	7	38	0.07	— 0.01	0.07	0.0	1	20	9	2	nw.	John C. Knecht.
Monumental	Del Norte	.....	5	68.2	.....	100	9	39	16	52	0.00	.....	0.00	0.0	0	30	1	0	.....	G. F. Morgan.
Mount Tamalpais	Marin	2,375	11	69.0	— 1.5	93	18	42	3	29	0.00	— 0.01	0.00	0.0	0	27	3	1	nw.	U. S. Weather Bureau.
Napa City	Napa	20	33	63.8	— 2.0	98	6	43	2	48	0.00	— 0.01	0.00	0.0	0	29	2	0	s.	Thomas Hull.
Napa (S. H.)	....do	60	32	66.6	+ 0.8	95	6	48	1†	43	0.00	— 0.01	0.00	0.0	0	24	7	0	sw.	W. H. Martin.
Needles	San Bernardino	477	18	96.0	+ 1.6	118	9	75	6	34	0.44	+ 0.02	0.29	0.0	2	27	0	4	w.	Santa Fe Co.
Nellie	San Diego	5,350	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. J. Bailey.
Nevada City	Nevada	2,580	18	71.4	+ 2.8	100	9†	35	4	52	0.00	— 0.03	0.00	0.0	0	29	0	2	sw.	S. W. Marsh.
Newcastle	Placer	970	17	80.6	+ 0.4	108	8†	44	5	58	0.00	— 0.01	0.00	0.0	0	31	0	0	s.	George D. Kellog.
Newhall	Los Angeles	1,200	33	74.2	— 2.4	110	20	55	2	...	0.00	0.00	0.00	0.0	0	31	0	0	se.	Southern Pacific Co.
Newman	Stanislaus	91	21	79.3	— 5.3	108	19	48	5	50	0.00	— 0.01	0.00	0.0	0	31	0	0	n.	E. S. Wangenheim.
Nimshew	Butte	2,500	6	73.2	.....	101	8†	42	4	41	0.00	.....	0.00	0.0	0	31	0	0	.....	Cal. Gas & Electric Co.
North Bloomfield	Nevada	3,200	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. G. Shand.
North Fork	Madera	3,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. H. Shinn.
Oakdale	Stanislaus	156	16	78.4	— 1.3	104	8†	54	4	...	0.00	0.00	0.00	0.0	0	29	2	0	nw.	Southern Pacific Co.
Oakland	Alameda	36	34	61.5	— 0.3	80	5	51	3†	29	T.	— 0.02	T.	0.0	0	11	14	6	w.	Chabot Observatory.
Oceanside	San Diego	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. D. Brodie.
Ojai Valley	Ventura	900	4	72.2	.....	108	20†	44	3†	48	T.	.....	T.	0.0	0	28	3	0	sw.	W. H. Duncan.
Orland	Glenn	254	28	81.2	— 5.2	113	8	50	3	46	0.00	— 0.02	0.00	0.0	0	31	0	0	se.	W. W. Patch.
Orleans	Humboldt	520	7	80.3	.....	115	9	49	1	55	0.08	.....	0.08	0.0	1	26	5	0	.....	Fred T. Hale.
Oroville (near)	Butte	250	26	79.5	— 1.8	108	8	50	4	47	0.00	— 0.03	0.00	0.0	0	26	4	1	s.	E. D. Fairchild.
Palermo	....do	213	19	78.2	— 0.7	109	8	50	30	48	T.	— 0.04	T.	0.0	0	24	7	0	s.	Miss Hettie Boalt.
Palm Springs	Riverside	584	21	92.1	— 5.6	112	6	76	2	...	0.80	+ 0.77	0.80	0.0	1	23	5	3	w.	Southern Pacific Co.
Pasadena	Los Angeles	827	20	73.8	+ 2.4	105	21	49	5†	48	0.02	+ 0.02	0.02	0.0	1	31	0	0	sw.	E. R. Sorver.
Paso Robles	San Luis Obispo	800	23	69.4	— 3.1	109	21†	36	3	59	0.00	0.00	0.00	0.0	0	31	0	0	nw	Dr. F. W. Sawyer.
Peachland	Sonoma	190	14	63.6	— 2.4	95	6	39	2	53	T.	— 0.01	T.	0.0	0	19	12	0	sw.	E. H. Parnell.
Penstock Camp	Tuolumne	3,750	3	78.0	.....	98	10	48	4†	28	0.00	.....	0.00	0.0	0	29	0	2	w.	Tuolumne W. P. Co.
Placerville	El Dorado	1,875	21	73.9	+ 1.2	100	8†	42	4	44	0.00	— 0.02	0.00	0.0	0	27	4	0	sw.	A. Baring'Gould.
Point Lobos	San Francisco	250	17	55.0	— 1.0	72	6	48	7†	20	T.	— 0.01	T.	0.0	0	3	7	21	sw.	John Hyslop.
Point Reyes	Marin	490	18	52.0	— 1.7	64	5	45	7	17	T.	— 0.10	T.	0.0	0	6	5	20	nw.	U. S. Weather Bureau.
Porterville	Tulare	464	21	83.3	— 4.8	111	20†	47	5	48	0.04	— 0.02	0.02	0.0	2	27	4	0	.....	Harry E. Cowie.
Quincy	Plumas	3,400	15	66.0	+ 0.1	97	8†	33	4	54	0.00	— 0.08	0.00	0.0	0	29	2	0	sw.	D. N. Rogers.
Red Bluff	Tehama	307	33	82.0	— 0.1	111	9	54	4	37	0.00	— 0.03	0.00	0.0	0	30	1	0	se.	U. S. Weather Bureau.
Redding	Shasta	552	35	82.6	+ 0.3	108	8†	55	4	35	T.	— 0.09	T.	0.0	0	30	1	0	n.	L. F. Bassett.
Redlands	San Bernardino	1,352	17	77.6	— 0.7	108	21	51	8†	45	0.38	+ 0.24	0.38	0.0	1	20	8	3	w.	Paul W. Moore.
Reedley	Fresno	347	10	82.4	+ 0.2	109	9†	49	4	51	0.00	0.00	0.00	0.0	0	29	0	2	.....	Santa Fe Co.
Rialto (near)	San Bernardino	2,250	4	77.0	.....	103	21	48	3	34	0.00	.....	0.00	0.0	0	24	7	0	sw.	So. California Edison Co.
Riverside	Riverside	851	28	77.0	+ 0.7	107	20	49	2†	50	0.00	— 0.02	0.00	0.0	0	21	9	1	w.	C. W. Barton.
Rocklin	Placer	249	39	75.7	— 4.3	106	18	45	4	47	0.00	— 0.03	0.00	0.0	0	26	2	3	se.	Southern Pacific Co.
Rohnerville	Humboldt	75	7	57.2	.....	73	8	43	5	24	0.00	.....	0.00	0.0	0	19	9	3	n.	Dr. R. Callahan.
Sacramento (1)	Sacramento	71	33	72.3	— 0.2	101	18	50	4	40	0.00	0.00	0.00	0.0	0	28	3	0	s.	U. S. Weather Bureau.
Sacramento (2)	....do	35	57	71.4	— 2.2	98	19†	48	4	36	T.	— 0.03	T.	0.0	0	25	5	1	s.	S. H. Gerrish.
St. Helena	Napa	255	2	69.4	.....	105	20	41	2†	56	0.00	.....	0.00	0.0	0	25	0	6	.....	B. F. Kettlewell.
Salinas	Monterey	40	36	61.6	— 1.1	82	5	44	5	38	0.00	0.00	0.00	0.0	0	30	1	0	w.	Miss E. Ruth Abbott.
San Bernardino	San Bernardino	1,054	18	78.0	+ 3.0	111	21	44	5	57	0.05	+ 0.01	0.05	0.0	1	18	13	0	sw.	Dr. A. K. Johnson.
San Diego	San Diego	93	39	67.0	— 0.1	82	6	56	4	19	0.01	0.00	0.01	0.0	1	19	10	2	nw.	U. S. Weather Bureau.
San Francisco	San Francisco	207	39	56.4	— 0.9	76	5	48	7	25	T.	— 0.02	T.	0.0	0	15	11	5	w.	Do.
San Jacinto	Riverside	1,550	17	78.6	+ 2.4	107	7	49	3†	49	0.00	— 0.08	0.00	0.0	0	15	10	6	w.	E. T. Tanner.
San Jose	Santa Clara	95	35	65.5	— 1.4	89	6	43	1	42	T.	0.00	T.	0.0	0	28	2	1	nw.	U. S. Weather Bureau.
San Leandro	Alameda	48	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. B. Sanford.
San Luis Obispo	San Luis Obispo	201	15	63.2	0.00	88	5	42	3	41	T.	0.00	T.	0.0	0	19	9	3	nw.	U. S. Weather Bureau.
San Mateo	San Mateo	22	36	68.4	+ 3.0	88	6	58	3†	...	0.00	0.00	0.00	0.0	0	20	0	1	nw.	Southern Pacific Co.
San Miguel	San Luis Obispo	616	23	81.1	+ 6.1	103	20	55	13	...	0.00	0.00	0.00	0.0	0	28	3	0	.....	Do.
San Miguel Island	Santa Barbara	500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Capt. W. G. Waters.
Sanger	Fresno	371	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Santa Barbara	Santa Barbara	130	26	65.1	0.0	84	20	49	4	31	0.02	0.00	0.02	0.0	1	25	6	0	.....	George W. Russell.
Santa Clara	Santa Clara	90	21	65.2	+ 2.2	91	6	40	2	46	T.	0.00	T.	0.0	0	29	1	1	nw.	Santa Clara College.
Santa Cruz	Santa Cruz	20	37	61.0	— 2.9	90	18	42	1†	40	0.00	— 0.01	0.00	0.0	0	25	1	5	s.	W. R. Springer.
Santa Magarita	San Luis Obispo	996	21	84.2	+13.5	104	21	65	24	...	0.00	— 0.02	0.00	0.0	0	21	4	6	sw.	Southern Pacific Co.
Santa Maria	Santa Barbara	220	22	69.1	+ 4.7	84	30	53	2†	24	T.	— 0.02	T.	0.0	0	29	0	2	sw.	L. E. Blochman.
Santa Monica	Los Angeles	110	25	61.8	— 8.1	78	7†	47	4	24	T.	0.00	T.	0.0	0	24	6	1	w.	N. D. Ingham.
Santa Rosa	Sonoma	181	21	64.1	— 3.1	95	6	40	2	49	0.00	— 0.09	0.00	0.0	0	23	8	0	sw.	M. L. McDonald, jr.
Selma	Fresno	311	24	85.4	0.0	106	18	65	3†	...	0.00	0.00	0.00	0.0	0	31	0	0	nw.	Southern Pacific Co
Shasta	Shasta	1,049	14	80.8	— 0.9	115	9	45	1†	51	T.	— 0.01	T.	0.0	0	27	3	1	nw.	Dr. T. J. Edgecomb.
Sierra Madre	Los Angeles	1,400	13	74.4	+ 2.2	104	21	51	4	38	0.02	+ 0.01	0.02	0.0	1	27	3	1	s.	Mrs. A. E. Gregory.
Sierraville	Sierra	5,000	.....	64.9[h]	.....	97	9	35	23	56	0.09	.....	0.09	0.0	1	27	2	2	sw.	C. D. Johnson.
Sisson	Siskiyou	3,555	21	66.3	— 3.4	94	9	34	4	50	0.00	— 0.05	0.00	0.0	0	30	1	0	n.	Southern Pacific Co.
Soledad	Monterey	188	36	64.1	— 2.0	93	19†	45	1	...	0.00	0.00	0.00	0.0	0	31	0	0	s.	Do.
Southeast Farallon	San Francisco	30	7	52.2	.....	58	10	48	7	7	0.03	.....	0.01	0.0	3	6	4	21	nw.	U. S. Weather Bureau.
Sonora	Tuolumne	1,825	22	77.0	.....	102	20	45	3	42	0.00	— 0.02	0.00	0.0	0	30	1	0	sw.	Charles P. Jones.
Stirling City	Butte	3,525	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Butte County R. R. Co.
Stockton (S. H.)	San Joaquin	23	39	73.3	+ 0.7	101	8†	48	4	39	0.00	— 0.02	0.00	0.0	0	31	0	0	nw.	State Hospital.
Storey	Madera	206	10	79.6	+ 1.8	109	21	45	3	47	0.00	0.00	0.00	0.0	0	30	0	1	nw.	Santa Fe Co.
Suisun	Solano	20	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Summerdale	Mariposa	5,270	14	69.4	+ 0.9	98	22	38	3	40	0.29	+ 0.26	0.15	0.0	3	21	7	3	.....	J. H. Lowry.

TABLE 1.—*Climatological data for July, 1910. District No. 11*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
California—Cont'd.																				
Summit	Placer	7,017	37	63.0	+ 2.0	86	9	29	5	46	1.16	+ 0.96	0.96	0.0	2	26	2	3	sw.	Southern Pacific Co.
Susanville	Lassen	4,175	21	71.0	− 0.8	98	9†	41	4†	44	0.41	+ 0.29	0.14	0.0	5	22	7	2	...	James Branham.
Tamarack	Alpine	8,000	4	59.5	.....	83	9	31	5	41	1.90	.....	1.50	0.0	2	22	6	3	sw.	William Bennett.
Tehachapi	Kern	3,964	33	77.5	+ 1.1	96	4	61	2	....	0.00	− 0.01	0.00	0.0	0	.....	.....	.....	.....	Southern Pacific Co.
Tehama	Tehama	220	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Three Rivers	Tulare	870	....	79.7	.....	108	21	41	4	45	0.06	.....	0.04	0.0	2	26	5	0	sw.	E. D. Barton.
Towle	Placer	3,704	24	71.0	− 0.1	98	8	36	4	44	0.00	− 0.11	0.00	0.0	0	25	0	6	s.	Southern Pacific Co.
Tracy	San Joaquin	64	30	77.7	− 2.2	102	18†	60	2†	....	0.00	− 0.01	0.00	0.0	0	31	0	0	nw.	Do.
Ukiah	Mendocino	620	17	73.1	− 0.3	109	8†	44	30	59	0.00	− 0.03	0.00	0.0	0	27	4	0	nw.	Dr. George McGowen.
Upland	San Bernardino	1,750	13	74.0	+ 0.9	104	20†	42	5	50	0.00	− 0.01	0.00	0.0	0	16	14	1	w.	A. P. Harwood.
Upper Lake	Lake	1,350	25	74.3	+ 1.2	105	9	45	4	46	0.02	− 0.01	0.02	0.0	1	30	1	0	nw.	C. M. Hammond.
Vacaville	Solano	175	22	74.3	− 2.1	106	18†	46	4	49	0.00	0.00	0.00	0.0	0	16	15	0	sw.	G. O. Coburn.
Valley Springs	Calveras	673	21	77.4	− 3.6	109	18	59	15†	....	0.00	− 0.03	0.00	0.0	0	21	0	0	nw.	Southern Pacific Co.
Visalia	Tulare	334	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Santa Fe Co.
Warner Springs	San Diego	3,165	2	74.0	.....	96	19†	47	1†	39	1.61	.....	1.30	0.0	7	24	7	0	.....	Mrs. E. F. Sanford.
Wasco	Kern	336	10	79.4	− 2.5	116	19	49	4	53	0.00	0.00	0.00	0.0	0	31	0	0	.....	Santa Fe Co.
Watsonville	Santa Cruz	23	14	59.0	− 4.3	79	5	40	5†	39	0.00	0.00	0.00	0.0	0	5	20	6	sw.	Spreckels Sugar Co.
Westley	Stanislaus	90	21	82.3	− 0.8	106	21	60	2†	....	0.00	− 0.03	0.00	0.0	0	20	0	1	....	Southern Pacific Co.
Wheatland	Yuba	84	23	76.5	− 0.7	104	19†	49	4	39	T.	− 0.01	T.	0.0	0	28	2	1	s.	Wm. Lumbard.
Willows	Glenn	136	31	77.8	− 5.1	105	19	49	4	43	0.00	0.00	0.00	0.0	0	29	2	0	s.	M. T. Harrington, jr.
Yosemite	Mariposa	3,945	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. W. Tucker.

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for July, 1910. District No. 11, California.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oregon.																															
Klamath Agency	Klamath			.01																											0.01
Klamath Falls	...do																				.26										0.26
Lakeview	Pitt																														0.00
Long Valley	...do			T.									T.		T.					.04	.05	.02									0.11
Merrill	Interior Drainage			.01																	.80										0.81
Yonna	...do			.22											T.						.04	.04									0.30
California.																															
Aguanga	Coast																.13				.06										0.19
Alameda	...do																			T.											T.
Alturas	Sacramento			.01											.38					1.88	.02										2.29
Anderson	...do																														
Angles Camp	San Joaquin																	T.													T.
Angiola	...do																														0.00
Antioch	...do																														
Aptos	Coast																														0.00
Arrowhead Springs	...do																														0.00
Auburn	Sacramento																														0.00
Avalon	Ocean																	T.	T.												T.
Azusa	Coast																														0.00
Bagdad	Desert														T.																T.
Bakersfield	San Joaquin																														0.00
Barstow	Desert													*	.21			.02		T.					.09						0.32
Bear River	San Joaquin																														
Bear Valley (1)	Sacramento																														0.00
Bear Valley (2)	San Joaquin																														
Bear Valley Dam	Coast																														
Ben Lomond	...do																														0.00
Berkeley	...do																														0.00
Big Bar	Sacramento																														
Biggs	...do																														0.00
Bishop	Owens																														
Bishop Creek	...do																									T.	.50		T.			0.50
Blocksburg	Coast																			T.											T.
Blue Canyon	Sacramento																														0.00
Blythe	Desert				T.									.08	.38	.07	.10	T.							T.						0.63
Boulder Creek	Coast																														0.00
Bowmans Dam	Sacramento																														
Branscomb	Coast																														0.00
Brawley	Desert																														0.00
Brush Creek	Sacramento																														0.00
Burney	...do																														
Butte Creek House	...do																														
Butte Valley	...do																			.02											0.02
Calexico	Desert																					.08									0.08
Caliente	San Joaquin																														0.00
Calistoga	Coast																														
Campbell	...do																			T.											T.
Campo	...do													.74				1.06	.27	.90	.47										3.44
Camptonville (near)	Sacramento																														0.00
Cedarville	Mountain Lakes																			.03											0.03
Chester	Sacramento																														0.00
Chico	...do																														0.00
Chico (near)	...do																														0.00
China Flat	Coast																														0.00
Chino	...do																														0.00
Cisco	Sacramento																														0.00
Claremont	Coast																														0.00
Clear Lake	Klamath																														
Cloverdale	Coast																														0.00
Colfax	Sacramento																														0.00
Colgate	...do																														0.00
Colusa	...do																														0.00
Corning	...do																														0.00
Corona	Coast																														0.00
Crockers	San Joaquin																														
Cuyamaca(1)	Coast														.31	.06			T.		.03	.74					.36				1.50
Daunt	San Joaquin																	.15	.11												0.26
Davisville	Sacramento																														0.00
Deer Creek	...do																														0.00
Delta	...do																														0.00
Denair	San Joaquin																														0.00
Descanso	Coast													.22		.15			.10		.12					.13					0.72
Dinuba	San Joaquin																														
Dobbins	Sacramento																										T.				T.
Dorris	Klamath																														
Downieville	Sacramento																														0.00
Dudleys	San Joaquin																	T.	.09	.08						*	T.				0.17
Dunnigan	Sacramento																														0.00
Dunsmuir	...do																														0.00
Durham	...do																														0.00
Dyerville	Coast																														
Edgewood	Klamath	.03		.06								.18							.07		.53										0.87
Edison	San Joaquin																														
El Cajon	Coast																		.33								.01				0.34
Electra	San Joaquin																														0.00
Elsinore	Coast																				.09										0.09
Emigrant Gap	Sacramento																														0.00
Escondido	Coast																		.14								.11				0.25
Eureka	...do																														0.00
Fairmont	...do																		.03												0.03
Farmington	San Joaquin																														0.00
Felton	Coast																														0.00
Firebaugh	San Joaquin																														0.00
Folsom	Sacramento																														0.00
Fordyce Dam	...do														.06					.08							T.				0.14
Fort Bragg	Coast																														0.00
Fort Ross	...do																														
Fouts Springs	Sacramento			T.																											T.
Fredalba	Coast														.02									T.							0.02
Fresno	San Joaquin																		T.												T.
Fruto	Sacramento																														0.00
Galt	San Joaquin																														0.00
Georgetown	...do																														0.00
Gilroy	Coast																														0.00

TABLE 2.—*Daily precipitation for July, 1910. District No. 11*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
California—Cont'd.																															
Gilta	Coast																														0.00
Glendora	...do																														
Glen Ranch	...do														.01																0.01
Glennville	San Joaquin																	T.	.10												0.10
Glenwood	Coast																														0.00
Gold Run	Sacramento																														0.00
Gonzales	Coast																														0.00
Grass Valley	Sacramento																														0.00
Greenville	...do														T.					.35											0.35
Gridley	...do																														0.00
Groveland	San Joaquin																		.12												0.12
Guinda	Sacramento																														
Hanford	San Joaquin																														0.00
Head Dam	Sacramento																														0.00
Healdsburg	Coast																														0.00
Hearst	...do			.01									T.																		0.01
Heber	Desert													T.	T.	T.															T.
Helen Mine	Coast																														
Hesperia	Desert																	.32													0.32
Holcomb	Coast														.03	.32	.25	.28			.25					.56				.77		2.46
Hollister	...do																										.06				0.06
Hornbrook	...do																														0.00
Hot Springs	San Joaquin																		.01	T.							T.				0.01
Hullville	Coast			.05																											0.05
Idyllwild	...do															.07	.10	.07	.31												0.55
Independence	Owens														T.			.18	.09			T.						T.	T.		0.27
Indio	Desert														T.																T.
Inskip	Sacramento																														0.00
Ione	San Joaquin																														
Iowa Hill	Sacramento																														
Isabella	San Joaquin																														
Jacksonville	...do																														0.00
Jamestown	...do																	.05													0.05
Jenny Lind	...do																														0.00
Johnsville	Mountain Lakes																														
Jolon	Coast																														0.00
Julian	...do															.50						.90				.95					2.35
Kennedy Mine	San Joaquin																														0.00
Kennett	Sacramento																														0.00
Kentfield	Coast																														0.00
Kernville	San Joaquin																														
King City	Coast																														0.00
Knights Landing	Sacramento																														0.00
Knob	...do												.09	T.				T.													0.09
La Grange	San Joaquin																														0.00
Lake Eleanor	...do																		.09												0.09
Lakeside	Coast																										T.				T.
La Porte	Sacramento																										T.				T.
Lathrop	San Joaquin																														0.00
Laurel	Coast																														0.00
Laytonville	...do																														
Le Grand	San Joaquin																		.20												0.20
Lemon Cove	...do																		T.												T.
Letter Box	Sacramento																														
Lick Observatory	Coast									.03										.01											0.04
Livermore	...do																														
Lodi	San Joaquin																														0.00
Lone Pine	Owens														T.				.18		T.							T.			0.18
Long Camp	San Joaquin																		.19												0.19
Long Valley	Mountain Lakes																	T.	T.	T.											T.
Lordsburg	Coast																														0.00
Los Alamos	...do																														
Los Angeles	...do																		T.						T.	.04					0.04
Los Banos	San Joaquin																														0.00
Los Burros Mine	Coast																														
Los Gatos	...do			T.																T.											T.
Los Vaqueros	...do																														
Lowe Observatory	...do																												T.		T.
Lytle Creek	...do																														0.00
McCloud	Sacramento																														
Macdoel	Klamath			.57																		.10									0.67
Madeline	Mountain Lakes			T.	.14						.58				.01				.63	.27	T.								T.		1.63
Magalia	Sacramento																														0.00
Mammoth Tank	Desert													T.	.76												T.				0.76
Mariposa	San Joaquin																		.31												0.31
Marysville	Sacramento																														0.00
Mecca	Desert																														0.00
Melones	San Joaquin																														0.00
Menlo Park	Coast																														0.00
Merced	San Joaquin																														0.00
Merced Falls	...do																														0.00
Mesa Granda	Coast																					.01					.09				0.10
Mill Creek (1)	San Joaquin																														0.00
Mill Creek (2)	Coast																														
Mills College	...do		T.																												T.
Milo	San Joaquin																														
Milton (near)	...do																		T.												T.
Modesto	...do																										T.				T.
Mojave	Desert																														
Mokelumne Hill	San Joaquin																		T.												T.
Mono Ranch	Coast																									T.					T.
Montague	Klamath																														
Monterey	Coast																														0.00
Monterio	San Joaquin																		.07												0.07
Montgomery Creek	Sacramento																														
Monumental	Coast																														0.00
Morena Dam	...do																														
Mount Tamalpais	...do																														0.00
Mount St. Helena	...do																														
Napa City	...do																														0.00
Napa (S. H.)	...do																														0.00
Needles	Desert													.15	.29																0.44
Nellie	Coast																														
Nevada City	Sacramento																														

TABLE 2.—*Daily precipitation for July, 1910. District No. 11*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
California—Cont'd.																																	
Newcastle	Sacramento																																0.00
Newhall	Coast																																0.00
Newman	San Joaquin																																0.00
Nimshew	Sacramento																																0.00
North Bloomfield	...do																																.....
North Fork	San Joaquin																																.....
North Lakeport	Coast																																.....
Oakdale	San Joaquin																																0.00
Oak Grove	Coast												.02	.11						.04	.61						.02						0.80
Oakland	...do			T.																													T.
Oakville	...do																																0.00
Oceanside	...do																																.....
Ojai Valley	...do																		T.														T.
Orland	Sacramento																																0.00
Orleans	Klamath																			.08													0.08
Oroville	Sacramento																																0.00
Ozena	Coast							.25																									0.25
Palermo	Sacramento																			T.													T.
Palm Springs	Desert														.80																		0.80
Parkfield	Coast																		.04														0.04
Pasadena	...do																														.02		0.02
Paso Robles	...do																																0.00
Peachland	...do																												T.		T.		T.
Penstock Camp	San Joaquin																																0.00
Peyton	Sacramento																																0.00
Phoenix Dam	San Joaquin																	T.															T.
Pilot Creek	Sacramento																		T.								T.						T.
Pine Crest	Coast																			T.						T.							T.
Pittville	Sacramento																																.....
Placerville	...do																																0.00
Point Lobos	Coast															T.																	T.
Point Loma	...do																		.02										.01				0.03
Point Reyes	...do			T.																													T.
Polasky	San Joaquin																																0.00
Porterville	...do																	.02	.02														0.04
Priest Valley	Coast																																.....
Quincy	Sacramento																																0.00
Red Bluff	...do																																0.00
Redding	...do		T.																														T.
Redlands	Coast																	.38													T.		0.38
Reedley	San Joaquin																																0.00
Represa	Sacramento																																0.00
Rialto (near)	Coast																																0.00
Rio Vista	Sacramento																										T.						T.
Riverside	Coast																																0.00
Rocklin	Sacramento																																0.00
Rohnerville	Coast																																0.00
Sacramento (1)	Sacramento																																0.00
Sacramento (2)	...do																										T.						T.
Saint Helena	Coast																																0.00
Salinas	...do																																0.00
San Bernardino	...do																	.05	T.														0.05
San Diego	...do																		.01														0.01
San Francisco	...do																			T.													T.
San Jacinto	...do																																0.00
San Jose	...do			T.																T.													T.
San Leandro	...do																																.....
San Luis Obispo	...do																		T.														T.
San Mateo	...do																																0.00
San Miguel	...do																																0.00
San Miguel Island	Ocean																																.....
Sanger	San Joaquin																																.....
Santa Ana River	Coast																																.....
Santa Barbara	...do																			.02						T.							0.02
Santa Clara	...do		T.																														T.
Santa Cruz	...do																																0.00
Santa Margarita	...do																																0.00
Santa Maria	...do																		T.														T.
Santa Monica	...do																		T.														T.
Santa Rosa	...do																																0.00
Sausalito	...do																																0.00
Selma	San Joaquin																																0.00
Seven Oaks	Coast															0.12					.38										.88		1.38
Shasta	Sacramento		T.																														T.
Shingle Springs	San Joaquin																																.....
Sierra Madre	Coast																		T.							T.					.02		0.02
Sierraville	Mountain Lakes																		T.	.09													0.09
Sisquoc Ranch	Coast																																.....
Sisson	Sacramento																																0.00
Soledad	Coast																																0.00
Sonora	San Joaquin																																0.00
S. E. Farallon	Ocean													.01		.01									.01								0.03
Spreckeles	Coast																																.....
Squirrel Inn	...do														T.												T.						T.
Stirling City	Sacramento																																.....
Stockton (S. H.)	San Joaquin																																0.00
Story	...do																																0.00
Suisun	Sacramento																																.....
Summerdale	San Joaquin																	.08	.06	.15													0.29
Summit (1)	Sacramento														.20					.96													1.16
Summit (2)	Coast																																0.00
Surrey	...do																	T.								T.							T.
Susanville	Mountain Lakes			.03						.02					.10				.14	.12													0.41
Tamarack	Sacramento																	T.	.40	1.50													1.90
Tehachapi	San Joaquin																																0.00
Tehama	Sacramento																																.....
Three Rivers	San Joaquin																	.02	.04														0.06
Towle	Sacramento																																0.00
Tracy	San Joaquin																																0.00
Tulare	...do																	T.															T.
Tustin (near)	Coast																		T.	T.													T.
Ukiah	...do																																0.00
Upland	...do																																0.00
Upper Lake	...do			.02																													0.02

TABLE 2.—*Daily precipitation for July, 1910. District No. 11*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
California—Cont'd.																																	
Upper Matole	Coast																																0.00
Vacaville	Sacramento																																0.00
Valley Springs	San Joaquin																																0.00
Ventura	Coast																																
Visalia	San Joaquin																																
Warner Springs	Coast													.03	.01	.03			.20			.03			.01		1.30						1.61
Wasco	San Joaquin																																0.00
Watsonville	Coast																																0.00
Weaverville	Sacramento																																
Weitchpec	Klamath																																
West Branch	Sacramento																																0.00
Westley	San Joaquin																																0.00
West Point	....do															T.																	T.
West Saticoy	Coast																																0.00
Wheatland	Sacramento																										T.						T.
Willows	....do																																0.00
Woodleaf	....do																																
Yosemite	San Joaquin																																0.00
Yuciapi	Coast																																

TABLE 3.—*Maximum and minimum temperatures at selected stations, July, 1910. District No. 11, California.*

Date.	Lakeview, Oreg.		California.																							
			Alturas.		Barstow.		Branscomb.		Brawley.		Colusa.		Eureka.		Fresno.		Independence.		Los Angeles.		Mount Tamalpais.		Nevada City.		Porterville.		Red Bluff.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	80	25	82	39	100	60	66	38	104	62	83	60	59	53	90	56	90	52	75	55	70	53	85	42	93	54	87	61
2...	85	30	82	40	99	62	69	39	106	66	84	58	58	52	91	57	92	57	74	58	65	44	89	41	94	55	84	60
3...	90	32	77	45	94	57	70	44	104	75	78	53	58	52	78	55	86	60	73	59	56	42	70	43	90	50	75	56
4...	86	20	75	45	94	67	76	46	106	72	84	48	59	51	83	51	82	48	77	55	67	47	82	35	94	48	85	54
5...	89	30	88	33	97	55	85	49	108	72	90	64	60	50	94	57	88	53	87	57	79	60	88	42	95	47	93	63
6...	86	40	91	40	104	63	89	48	113	75	95	75	59	52	101	64	95	56	93	64	85	60	95	46	106	53	98	65
7...	94	38	97	43	106	63	94	55	114	80	101	74	58	51	105	69	98	59	90	61	85	73	97	50	106	59	105	68
8...	90	29	95	52	109	64	100	60	109	72	105	75	62	49	106	70	101	60	1	56	91	75	98	51	107	65	111	74
9...	87	27	99	52	108	65	95	65	111	70	105	77	60	51	108	74	102	65	77	59	83	54	100	55	109	66	111	80
10...	89	28	98	49	110	68	82	52	111	79	101	74	58	51	101	68	99	68	75	57	76	53	97	57	104	70	95	72
11...	90	28	98	51	108	69	92	52	112	70	94	69	59	51	104	64	100	66	74	56	79	62	97	50	104	68	100	68
12...	92	23	97	49	108	69	94	53	110	70	96	66	58	51	104	65	97	63	78	56	81	63	97	49	106	63	100	70
13...	96	27	100	48	112	65	88	52	104	87	97	61	57	50	104	66	94	62	73	56	72	57	95	51	110	63	100	68
14...	94	36	91	46	97	70	78	50	95	78	93	60	56	50	102	60	88	70	73	54	57	44	90	55	107	66	93	67
15...	98	36	89	44	98	70	78	46	98	78	91	59	59	52	98	59	91	58	82	58	69	44	88	46	101	59	88	58
16...	98	31	94	38	103	69	85	50	105	79	96	67	58	52	102	65	93	62	85	63	79	65	96	47	103	65	98	63
17...	97	40	95	40	106	75	89	42	106	78	99	76	58	50	102	71	90	62	91	66	84	68	97	53	105	67	103	63
18...	96	32	95	51	105	70	93	47	106	82	102	73	60	47	107	78	90	59	92	64	93	78	98	58	108	72	105	71
19...	100	42	99	54	107	71	97	65	110	81	103	78	63	50	106	78	94	66	85	65	89	78	98	63	110	73	107	77
20...	96	24	90	54	110	73	95	62	115	82	103	75	60	52	110	76	98	63	89	65	90	77	100	59	111	75	105	78
21...	97	27	92	54	110	70	88	58	106	81	102	72	59	53	110	76	98	65	92	63	86	69	98	57	111	73	105	75
22...	90	40	86	46	108	74	84	46	105	85	102	66	59	51	105	71	99	64	81	61	82	66	95	48	106	69	99	70
23...	91	36	94	42	103	70	91	51	99	78	98	66	60	51	104	65	99	68	78	63	78	67	98	46	105	60	102	69
24...	90	39	94	45	106	69	90	52	102	77	96	69	58	52	100	64	97	65	79	60	75	63	94	48	100	64	100	65
25...	92	40	96	50	105	68	88	53	104	72	93	55	58	51	96	66	90	67	82	62	72	53	92	49	98	69	99	65
26...	93	29	93	54	104	67	88	52	102	82	92	68	57	51	100	72	93	66	77	60	77	65	93	54	103	66	96	66
27...	95	31	92	48	105	69	85	51	104	75	91	64	53	50	100	70	88	64	76	62	72	59	94	50	103	66	95	65
28...	94	36	91	48	106	70	87	50	104	73	89	59	58	49	99	64	92	59	75	61	72	58	94	49	101	65	93	63
29...	100	45	92	48	105	69	88	49	108	97	94	63	55	51	101	65	96	62	76	60	76	64	95	52	102	64	98	63
30...	101	46	93	46	107	70	88	48	109	91	93	62	55	50	101	67	96	63	77	60	73	66	95	50	104	64	98	66
31...	97	43	93	44	106	69	83	45	100	77	87	64	59	51	97	63	96	64	77	60	72	55	91	47	101	60	92	60
Mns	93.0	33.4	91.9	46.4	104.6	67.4	86.3	50.6	106.2	77.3	94.7	66.1	58.4	50.9	100.3	66.0	93.9	61.9	80.5	59.9	76.9	61.2	93.1	49.8	103.3	63.3	97.5	66.5

Date.	California.																									
	Redlands.		Sacramento.		San Diego.		San Francisco.		San Jose.		San Luis Obispo.		Santa Barbara.		Santa Rosa.		Sisson.		Stockton.		Summit.		Susanville.		Yosemite.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	84	53	81	52	66	60	60	50	70	43	62	49	70	51	76	42	83	40	81	53	65	35	80	44	82	39
2	86	52	79	52	64	58	61	50	70	44	66	46	70	51	80	40	79	38	76	53	65	38	77	44	79	36
3	83	53	65	51	66	57	56	51	62	49	64	42	70	55	72	44	78	38	78	53	65	38	73	45	73	34
4	89	52	80	50	72	56	63	51	76	52	74	50	76	49	78	43	72	34	84	48	72	41	74	41	78	38
5	97	52	91	55	76	59	76	51	87	45	88	47	81	50	90	45	80	37	94	56	75	29	85	42	86	41
6	102	58	97	63	82	63	75	50	89	51	87	47	82	55	95	46	85	46	97	60	78	45	90	50	92	46
7	103	64	99	63	78	64	63	48	89	53	77	47	76	54	88	47	86	47	98	64	85	50	95	54	94	46
8	100	59	96	61	69	61	63	50	89	51	77	49	77	54	90	46	90	56	101	62	84	44	97	58	96	44
9	93	51	92	62	68	60	61	51	84	52	73	49	72	55	76	49	94	56	91	63	86	48	98	57	97	45
10	93	51	82	56	69	60	61	53	80	54	70	54	68	58	72	53	90	59	84	56	84	45	98	62	99	46
11	96	52	87	52	68	61	59	51	76	54	71	52	69	55	77	51	90	60	89	54	83	46	95	59	98	48
12	97	55	88	54	69	61	60	51	80	54	72	52	68	55	80	53	90	52	90	55	83	51	94	58	97	49
13	96	58	88	54	68	62	59	51	79	53	69	52	68	55	79	52	89	39	87	56	83	51	94	57	97	50
14	94	65	81	54	70	62	65	52	80	53	70	54	69	53	72	52	88	47	79	54	81	51	82	60	89	56
15	97	65	85	53	72	63	65	53	74	52	72	54	81	52	73	53	76	42	84	53	75	50	86	50	92	48
16	95	66	95	56	76	66	63	51	82	49	80	53	80	58	86	42	86	46	92	56	80	48	81	41	.....	.....
17	99	71	98	58	80	66	69	51	87	53	88	53	82	60	89	43	87	45	96	62	84	50	94	52	.....	.....
18	95	69	101	65	81	65	63	52	87	58	84	55	76	58	92	47	89	46	101	66	84	53	94	46	.....	.....
19	103	67	100	69	78	67	68	52	88	61	87	55	82	59	87	52	92	56	99	70	82	50	88	56	.....	.....
20	106	71	99	65	80	67	63	50	86	56	79	53	84	60	86	51	89	54	100	67	79	52	91	57	.....	.....
21	108	69	97	61	75	63	59	50	77	53	78	52	83	58	83	50	83	48	95	65	80	49	91	58	.....	.....
22	95	65	92	56	68	62	65	52	85	46	79	53	73	58	87	42	89	47	93	60	78	58	90	53	.....	.....
23	93	59	92	55	68	62	62	51	85	48	72	51	74	58	83	43	90	46	92	58	80	50	92	51	.....	.....
24	89	59	84	53	69	62	58	51	74	49	75	54	73	57	74	52	90	42	90	58	82	48	94	50	.....	.....
25	92	74	87	53	70	62	61	52	80	53	66	53	73	58	75	50	89	43	88	56	84	51	95	56	.....	.....
26	91	62	87	59	69	62	58	50	75	53	75	54	72	57	74	49	91	47	89	54	82	49	88	62	.....	.....
27	91	60	82	54	69	64	59	50	78	49	71	54	73	56	73	51	90	41	88	56	81	51	90	56	.....	.....
28	90	59	83	51	71	64	59	50	76	54	72	55	71	56	74	50	85	46	85	55	79	46	91	52	.....	.....
29	91	58	87	53	70	64	58	50	78	49	72	54	71	57	75	50	81	47	88	54	81	43	92	57	.....	.....
30	92	64	83	53	71	64	57	50	71	54	78	53	73	60	76	48	87	46	85	54	84	38	91	55	.....	.....
31	95	60	78	51	73	62	57	50	70	51	68	51	76	53	77	50	88	44	86	54	80	41	89	53	.....	.....
Mean	94.7	60.4	88.3	56.3	71.8	62.2	62.1	50.8	79.5	51.5	74.7	51.5	74.6	55.6	80.3	47.9	86.3	46.3	89.0	57.6	79.5	46.4	89.3	52.8	.....	.....